



Technology Standards

Deb Fredrickson (deb.fredrickson@k12.sd.us)
Peg Henson (peg.henson@state.sd.us)
Martin Sieverding (martin.sieverding@k12.sd.us)
Shane Steckelberg (shane.steckelberg@k12.sd.us)
Mark Heilmann (mark.heilmann@state.sd.us)

developed by Peg Henson /SDDOE

Speaking Points

- Brief History
- Overview of Process
- Standards Overview
- Next Steps
- Website Resources
- Assessment
- Questions

developed by Peg Henson/SDDOE

Why Standards?

- NCLB –Title II-D, Part 2
(formula/competitive)

The primary goal of the Ed Tech program is to improve student **academic achievement through the use of technology in elementary and secondary schools**. It is also designed to assist every student – regardless of race, ethnicity, income, geographical location, or disability – in becoming technologically literate by the end of eighth grade, and to encourage the effective integration of technology resources and systems with professional development and curriculum development to promote research-based instructional methods that can be widely replicated.

developed by Peg Henson/SDDOE

Why Standards?

■ NCLB –Title II-D, Part 2

Title II, Part D -- Enhanced Education Through Technology Goals:

1. Improve student academic achievement through the use of technology in elementary schools and secondary schools.
2. To assist every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student finishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability.
3. To encourage the effective integration of technology resources and systems with teacher training and curriculum development to establish research-based instructional methods that can be widely implemented as best practices by State educational agencies and local educational agencies.

developed by Peg Henson/SDDOE

Standards Process Overview

- Followed the same process as core content standards development
- Developed 06-07
- 40 Educators
 - Grade level groupings
 - K-2
 - 3-5
 - 6-8
 - 9-12

developed by Peg Henson/SDDOE

Standards Process Overview

- Developed Strands (5) Big ideas
- Developed Indicators for each strand
 - –essential understandings that will deepen k-12
- Created standards at each grade level
- Vertical aligned
 - K-12
- Board Approved July 2007

developed by Peg Henson/SDDOE

5 Strands (Big Ideas)

- **Strands** (click on title to go directly to the page of indicators)
 - [Nature, Concepts and Systems of Technology](#)
 - [Social Interactions in Information & Communication Technology](#)
 - [Information & Communication Technology Tools](#)
 - [Information & Communication Technology Processes](#)
 - [Information Literacy](#)

Click here to advance
Beyond indicators

developed by Peg Henson/SDDOE

Strand #1 - Nature, Concepts and Systems (systems thinking, interactions, and design)

- **Indicator 1:** Students understand the history and progression of technology in relation to the development and design of future technology.
- **Indicator 2:** Students analyze the parts of a technological system in terms of input, process, output, and feedback.
- **Indicator 3:** Students analyze the relationships and the connections between technologies in different fields of study and how they apply to communities.
- **Indicator 4:** Students understand the purpose and demonstrate the use of the design process in problem solving.

return

developed by Peg Henson/SDDOE

Strand #2 - Social Interactions in Information & Communication Technology

- **Indicator 1:** Students understand the safe, ethical, legal, and societal issues related to technology.
- **Indicator 2:** Students investigate the advantages and disadvantages of technology.

return

developed by Peg Henson/SDDOE

Strand #3 - Information & Communication Technology Tools

- **Indicator 1:** Students recognize and demonstrate skills in operating technological systems.
- **Indicator 2:** Students use technology to enhance learning, extend capability, and promote creativity.
- **Indicator 3:** Students evaluate and select information tools based on the appropriateness to specific tasks



developed by Peg Henson/SDDOE

Strand #4 - Information & Communication Technology Processes

- **Indicator 1:** Students understand the purpose of information technologies to communicate with a variety of collaborators.
- **Indicator 2:** Students exchange information and ideas for an identified purpose through Information Technologies.



developed by Peg Henson/SDDOE

Strand #5 - Information Literacy

- **Indicator 1:** Students use technology to locate and acquire information.
- **Indicator 2:** Students determine the reliability and relevancy of Information



developed by Peg Henson/SDDOE

**Guide to the Numbering and Symbol System
Used in the Document**

Standards are coded to cross-reference grades, goals/strands, indicators, and standards.

1.N.1.1.

Grade
↗

Strand
↗

Indicator
↗

Standard
↗

Grade refers to the grade level at which the standards are to be mastered by students.

Strand refers to the major area of Technology (e.g., Nature and Concepts, Social Interactions, Information Literacy) this group of standards address. These strands are coded:

developed by Peg Henson/SDDOE

Analogy

Think of each strand/or **Big Idea** as an **Umbrella** related to Technology (5) strands = 5 Umbrellas


IF

CP

CT

SI

NC



The Canvas on each umbrella is the **"Indicator"**
(Over arching understanding that will deepen from k-12
Each section of the canvas gets added as the grade is completed and understanding deepens)

developed by Peg Henson/SDDOE

Analogy

The Canvas on each umbrella is the **"Indicator"** for each BIG IDEA (STRAND)


IF

CP

CT

SI

NC

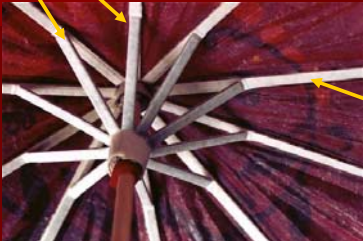


Over arching understanding that will stretch to connect each of the grade level standards into one unit of understanding just as a canvas stretches over an umbrella

developed by Peg Henson/SDDOE

(each spoke represents a different grade level of taught standards)

Analogy



Metal spokes are the grade level standards

All grade level standards need met to develop a **solid foundation** for the student's understanding of a big idea

developed by Peg Henson/SDDOE

Next Steps

- Pilot sites have been selected to implement the standards during 07-08 school year.
- A pretest was given in the fall 07 to 8th graders at the pilot sites
- Standards will be implemented 07-08 school year in pilot schools
- Post Assessment test will be given to 8th grade in pilot schools spring 08

developed by Peg Henson/SDDOE

Next Steps

- 08-09 All schools will implement standards
- Spring 09 Assessment will be given to all public 8th Grade Students
- Revision Cycle of Standards is expected to follow the same cycle as the core standards (7 years)

developed by Peg Henson/SDDOE

WEBSITE RESOURCES

developed by Peg Henson/SDDOE

TRAINING RESOURCES

developed by Peg Henson/SDDOE

developed by Peg Henson/SDDOE

[illegible]

A screenshot of a web browser displaying a blog post. The browser's address bar shows the URL 'http://sdedtechstandards.blogspot.com/2007/05/hello-and-welcome-to-technology.html'. The page has a blue header with the word 'BLOG' in large white letters. Below the header, a search bar contains the text 'SEARCH BLOG: MYTAG BLOG: Host Blog:'. The main content area has a white background with a blue border. The title of the post is 'South dakota k-12 educational technology standards'. The post is dated 'THURSDAY, MAY 17, 2007' and is titled 'hello and welcome to the technology standards blog spot'. The author is 'About Me: SOUTHERN DAKOTA TECHNOLOGY STANDARDS BLOG'. The post text says 'I am using a blog to help facilitate discussion about the new educational technology standards for South Dakota. We would love to hear your input.' There are four comments: 1. Anonymous said... 'When Will the standards be out to public comment?' (May 18, 2007). 2. Peg said... 'We are hoping to have them out by May 23, 2007' (May 18, 2007). 3. Anonymous said... 'The k-12 educational technology standards are now available to make open comment on.' (May 18, 2007). 4. Faulkton said... 'Overall I applaud the efforts of the committee to tackle such an arduous task. That having been said I have two minor issues to bring to your attention. Possibly both of those have been' (May 18, 2007). The bottom of the page shows 'SDDE'.

http://technology-standards.wikispaces.com/

WIKI

[pages](#)
[100](#)
[My Account](#)

[Home](#)
[Edit This Page](#)
[page](#)
[discussions \(1\)](#)
[history](#)
[notify me](#)

Welcome to the South Dakota K-12 Educational Technology Standards Wiki space!

PURPOSE: To provide a space that will serve as a test model to share, as one community, resources to enhance the teaching of the South Dakota Educational Technology Standards

GOAL:

1. To provide new opportunities for educators to utilize online resources in an authentic, relevant manner for an educational purpose.
2. To provide a web 2.0 space for teachers to become the authors on the web rather than be only a consumer
3. To provide additional examples, webpages, resources, and activities to each of the K-12 Educational Standards

[return to DOE Standards homepage](#) ¹⁰

Listed below are two types of links:

1. The first column is a list of the currently approved K-12 Educational Technology Standards by grade level.
2. The 2nd -5th column list the standards by Strand for teachers to submit resources, lesson plans, activities and much more.

	KC	SC	CT	CP	N
Kindergarten Standards	1	1	1	1	1
1st Grade Standards	1	1	1	1	1
2nd Grade Standards	2	2	2	2	2
3rd Grade Standards	3	3	3	3	3
4th Grade Standards	4	4	4	4	4
5th Grade Standards	5	5	5	5	5
6th Grade Standards	6	6	6	6	6
7th Grade Standards	7	7	7	7	7
8th Grade Standards	8	8	8	8	8
9-12th Grade Standards	9-12	9-12	9-12	9-12	9-12



Assessment Timeline Overview

- 07-08
 - Pilot implementation/Assessment
 - Roll out workshops
 - Beginning implementation by public districts
- 08-09
 - All public schools will implement standards
 - Privates are optional but encouraged
- Spring 09
 - Assessment will be given to all public 8th Grade Students

developed by Peg Henson/SDDOE

Sample Assessment

- Learning.com
 - Reliable, validity tested-criterion based assessment
 - Used in many states
 - Sample test activity
 - <http://www.learning.com/tla/20itemsample/fall06/>
 - <http://www.learning.com/tla/20itemsample/fall06/middle/>
 - 24/T-1 Kilobit/sec/user ex 64kb/user (stagger entry) -edperformance

developed by Peg Henson/SDDOE

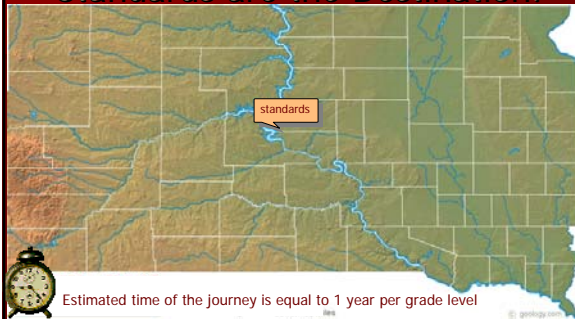
Notes:

The wiki and blog pages can be opened by a network administrator specifically without opening the parent domain fully. See website for instructions

The standards are designed for what students should know and be able to do. It is the districts decision as to how to get there see analogy next slide.

developed by Peg Henson/SDDOE

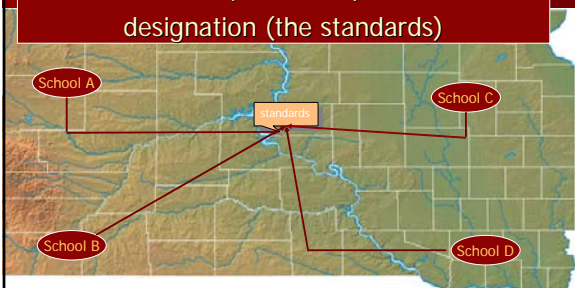
Standards are the Destination!



Curriculum is the Journey!

developed by Peg Henson/SDDOE

So, in this map Pierre represents the designation (the standards)



And the connecting lines represents the journey (curriculum) to get there.

Each school starts & travels a different path depending on their location

developed by Peg Henson/SDDOE

Questions

??

developed by Peg Henson/SODDE
